HAMMERHEAD™

OWNERS AND SERVICE MANUAL

INNOVATIVE CONCEPTS IN ENTERTAINMENT INC.

10123 MAIN STREET, CLARENCE, NY 14031
SERVICE: 1-716-759-0360
FAX: 1-716-759-0884
E-MAIL: service@icegame.com
WEBSITE: icegame.com

TABLE OF CONTENTS

INTRODUCTION……....PAGE 3

GAME FEATURES
GAME PLAY

INSTALLATION……...PAGE 4

BEFORE YOU BEGIN
INSTALLATION

PROGRAMMING OPTIONS……..PAGE 5 & 6

INTRODUCTION
USING THE PROGRAMMING OPTIONS

MAINTENANCE……...PAGE 7

QUICK TROUBLESHOOTING……..PAGE 8

GAME REPAIR……...PAGE 9 - 11

OPERATIONAL BACKGROUND
TROUBLESHOOTING PHILOSOPHY
MECHANICAL REPAIR

PARTS LISTINGS……....PAGE 12

SCHEMATICS……..PAGE 13 - 15

WIRING DIAGRAMS……..……..PAGE 16 - 28

WARRANTY INFORMATION……...PAGE 29

INTRODUCTION

GAME FEATURES

Thank you for purchasing the new Hammerhead™ game from I.C.E. This new “WACKY” game utilizes all the proven technology of it’s predecessor Smack-n-Alien. ICE has taken out the cost but not the quality, giving the customer a fresh look with full reliability.

Game cabinetry is stylish, yet bright. The game has been designed to be either a back-to-back centerpiece or a wall unit that will enhance the look of any location. Thick 16 gauge metal panels and marine grade water resistant plywood make the game extremely durable. The boat bow is made of a special high impact styrene that is easy to maintain.
The distortion printed marquee is made of .187 PETG. This is back printed, which will prevent the customer from damaging the printing. The PETG is more durable than acrylic and therefore will withstand impact better.
Electronics and sounds are the state of the art in digital technology. Robust design ensures a long trouble free life for your game. The game is very flexible with its programming options to allow it to be tailored to most locations easily.

GAME PLAY

The object of the game is to hit as many sharks as possible in the time allowed. (Note: the player must try to hit the sharks that are in the up position to score points)
The player does not get penalized for missing a shark.
The high score for the day will be displayed for all new players to try and match.

(NOTE: There is a bonus shark, the shark that pops up before game play starts. If a player hits that on he will be awarded one extra point.)

INSTALLATION

BEFORE YOU BEGIN

WARNING: WHEN INSTALLING THIS GAME, A GROUNDED A.C. RECEPTACLE MUST BE USED. FAILURE TO DO SO COULD RESULT IN INJURY TO YOURSELF OR OTHERS. FAILURE TO USE A GROUNDED RECEPTACLE COULD ALSO CAUSE IMPROPER GAME OPERATION, OR DAMAGE TO THE ELECTRONICS

DO NOT DEFEAT OR REMOVE THE GROUNDING PRONG ON THE POWER CORD FOR THE SAME REASON AS GIVEN ABOVE. USING AN IMPROPERLY GROUNDED GAME COULD VOID YOUR WARRANTY.

HAVE A QUALIFIED ELECTRICIAN CHECK YOU'RE A.C. RECEPTACLE TO BE SURE THE GROUND IS FUNCTIONING PROPERLY.

TOOLS NEEDED

The game normally comes fully assembled and ready for use.

If however, you need to disassemble or reassemble the marquee to the game for any reason, all that is needed is a 5/32 security Allen wrench.

INSTALLATION

The game comes ready to play with just a few simple things to keep in mind.

1. When installing the game, be sure you use a grounded A.C. outlet. If necessary, have it checked to be sure the ground is good.

THIS GAME IS DESIGNED TO DISSIPATE STATIC ELECTRICITY THROUGH THE GROUNDING PLANE OF THE GAME. IF THE A.C. GROUND DOES NOT WORK, THE GAME COULD DISCHARGE STATIC ELECTRICITY THROUGH THE GAME CIRCUITRY, WHICH COULD CAUSE DAMAGE.

2. Make sure the game is level after installation. It is necessary to make sure the game is level so the game will work properly.

3. Place the game into its final location and use the adjusting feet to level the game.

CAUTION: CHECK THAT THE A.C. VOLTAGE RATING ON THE BACK OF THE GAME MATCHES THE A.C. VOLTAGE OF YOUR LOCATION.

THE POWER SUPPLY IS NOT VOLTAGE ADJUSTABLE.

TO OPERATE THE GAME AT VOLTAGES OTHER THAN THOSE IT WAS DESIGNED FOR, PLEASE CONTACT OUR SERVICE DEPARTMENT FOR VOLTAGE CONVERSION INFORMATION.

Plug the game into the A.C. outlet and turn on power to the game. The switch for the game is located on a power module on the outside rear of the game.

It is now time to program your game……..

PROGRAMMING

INTRODUCTION

The Hammerhead™ game is extremely flexible from a programming standpoint. This allows the customer to “fine tune” the game to his or her exact needs.

This section will describe in detail each of the programming options and how they work.

PLEASE READ THIS SECTION THOROUGHLY BEFORE CALLING OUR SERVICE DEPARTMENT. MOST QUESTIONS REGARDING SET-UP AND OPERATION WILL BE FULLY EXPLAINED HERE.

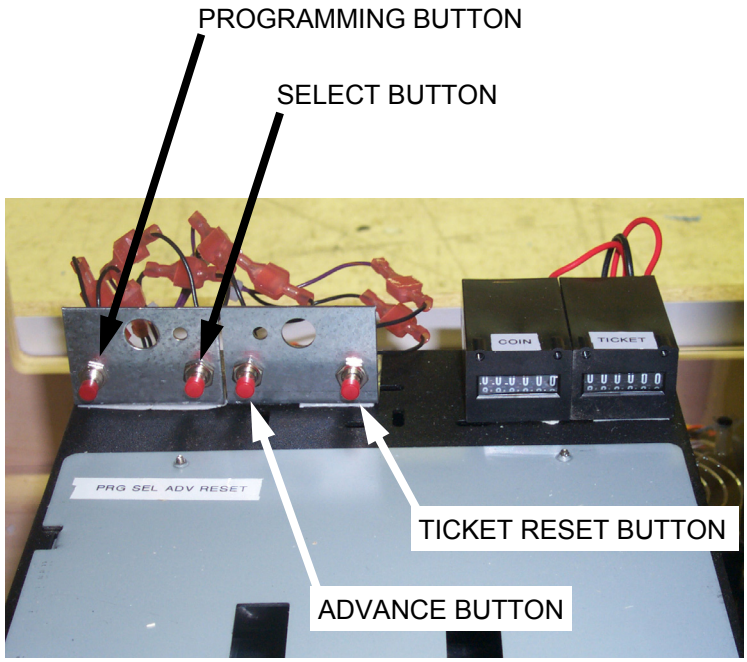
HOW TO USE THE PROGRAMMING OPTIONS

PROGRAMMING BUTTON – Use this button to enter and exit the programming mode. Press this button once to enter the mode, and once again to exit the mode.

SELECT BUTTON – Use this button to scroll through and “step” through the various options.

ADVANCE BUTTON – Use this button to “change” the value of a particular option.

TICKET RESET BUTTON - Use this button to “reset” ticket counter.



PROGRAMMING

OPTION	DEFAULT	MIN / MAX		DEFINITION
O	7	00	10	Volume adjustment
1	2	01	09	coins per credit switch 1
2	1	00	09	# of coin 1's per credit switch 2
3	20	10	99	number of seconds per game
4	2	00	06	difficulty (lower = easier)
5	2	00	09	tickets just for playing
6	5	01	10	hits per tickets
7	25	00	99	ticket cap per game
8	5	00	99	minutes between attract mode
9	3	01	03	attract mode type
10	00	00	01	factory reset

NOTE: After the factory reset has been selected, the programming button must be pressed twice to exit.

MAINTENANCE

GENERAL MAINTENANCE

This game has been designed to be as trouble and maintenance free as possible.

With this in mind the only basics are to keep the game clean. Below are the main areas to take care of with specific directions.

MARQUEE

The MARQUEE should be cleaned with a soapy water solution if covered with water-based dirt such as food products. After cleaning with soapy water, polish with a commercial plastic polish or a spray furniture polish. These have lubricating oils that condition the plastic and keep it shiny and clear looking. Never use regular glass cleaners as the ammonia in them actually damages the plastic and dulls it.

Any deep scratches can be reduced or eliminated with a scratch removing polish and buffing wheel.

CABINET

The cabinet plastic and decals can be cleaned with soapy water or spray furniture polish. DO NOT use any alcohol or petroleum based cleaners as they could damage the plastic or printed parts.

COIN MECHANISMS

The coin mechanisms should be cleaned periodically, as they will accumulate dirt, which will cause the coins to stick.

Remove the coin mech and clean them in a dish detergent solution and a stiff brush. Dry thoroughly and reinstall.

TICKET DISPENSERS

The biggest problem ticket dispensers have is ticket dust blocking the optical detectors. It is a good idea to occasionally use compressed air to remove the dust from the dispensers.

SHARK HEAD

The sharks should be cleaned with a soapy water solution. Be sure to wring the sponge out before cleaning. Excess water may drip onto coil bed assembly and cause permanent damage.

LUBRICATION

We do not recommend the use of any lubrication anywhere on the game.

The only moving parts on the game are the sharks. If you notice any sticking or binding of the sharks check the following.

- Dirt on the solenoid shafts – Remove the solenoid shafts, clean with isopropyl alcohol. Finish wiping clean with a good grade of spray polish only.

- Wear – If excessive solenoid body wear is noted, replace the solenoid coil.

QUICK TROUBLESHOOTING

GAME WILL NOT TAKE OR ADD MONEY CORRECTLY

- Micro switch not working or returning properly. Check and repair or replace as necessary.
- Bad Harnessing or connector. Check w/ohm meter and repair as necessary.
- Game programming set incorrectly. Check programming option and re-program if necessary.
- Bad Main P.C. Board. Check and repair or replace as necessary.

SHARKS WILL NOT POP UP DURING GAME PLAY

- Opto Sensor is not working properly. Test and replace as necessary.
- Reflective foil is not properly in place. Reapply foil correctly.
- Bad harnessing or connector. Check w/ohm meter and repair as necessary.
- Bad Main P.C. Board. Check and repair or replace as necessary.

GAME HAS NO SOUND

- Bad speaker. Check w/ohm meter for 4 or 8-ohm load. If not within this range, replace.
- Volume level set incorrectly. Check volume level in programming, and adjust if necessary.
- Bad Harnessing or connector. Check w/ohm meter and repair as necessary.
- Bad Main P.C. Board. Check and repair or replace as necessary

TICKET DISPENSER DOES NOT WORK OR WORKS IMPROPERLY

- Bad ticket dispenser. Repair or replace as necessary.
- Bad harnessing or connector. Check w/ohm meter and repair as necessary.
- Bad Main P.C. Board. Check and repair or replace as necessary.
- Game out of tickets. Add tickets
- Optical sensor on ticket dispenser dirty. Remove paper fuzz and debris with a soft brush.

NO FLORESCENT LIGHTING

- Bulb burned out. Replace bulb.
- Electronic ballast bad. Replace ballast.
- Harness bad or harness unplugged. Check w/ohm meter and plug in, repair or replace as necessary.
- No A.C. power to the game or Main fuse bad. Check fuse and A.C. power.

TICKETS OR HIGH SCORE DISPLAY Don't WORK PROPERLY

- Bad Display P.C. Board. Repair or replace Display board
- Bad Main P.C. Board. Repair or replace Main board.
- Bad display harnessing. Repair as necessary.

CAN'T ENTER OR EXIT PROGRAMMING OR OTHER ADJUSTMENT MODES

- Bad programming or adjustment buttons. Replace buttons. Check harnessing.
- Bad Main P.C. Board. Repair or replace Main board.

GAME REPAIR

WARNING: ALWAYS REMOVE POWER TO THE GAME BEFORE ATTEMPTING ANY SERVICE, UNLESS NEEDED FOR SPECIFIC TESTING.
FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SERIOUS INJURY TO YOURSELF OR OTHERS.

OPERATIONAL BACKGROUND

The HAMMERHEAD™ game has been manufactured with modular design in mind. Almost everything in the game can be EASILY removed for servicing. This makes it much easier for the repairman as he / she can work in a quieter less distracting environment away from the Game Room floor. The game relies on 1 coil bed assembly which can be remove from the game very easily.

Coin and low ticket sensing are done with conventional micro switches. In all areas of critical importance, optical sensors were developed specifically, and optimized for their particular application.

All P.C. Boards are made of premium quality board material and use time proven components to assure you of the most reliable designs possible.

We have put forth our best efforts and tested this game extensively to assure the best possible performance under the widest variety of operating conditions. We are ALWAYS however interested in our customers input for product improvement. If you have any questions or comments please feel free to contact our service department.

I.C.E. SERVICE DEPARTMENT
716-759-0360
NORMAL BUSINESS HOURS ARE:
MONDAY – FRIDAY, 9:00 AM TO 6:00 PM EST

TROUBLESHOOTING PHILOSOPHY

To find problems with the game, always first check what should be obvious. See that the game is plugged in, and that all of the fuses on the game are good. This includes the fuse that is located INSIDE the power module.

Next, check to see that all of the connectors are firmly seated and that none of the wires have been pulled out of them.

When trying to find out if specific components are bad or not. This will help you to know if you have a problem with a specific component, or maybe a problem with either the wiring or the Main P.C. Board.

Use extreme caution when using probes or voltmeters if the game is powered up. If doing continuity checks, it is important to disconnect the harnessing at both ends, as attached they may yield erroneous results.

If a P.C. Board is suspected as the cause of a problem, check to see that all of the components on the board are firmly attached. Pay special attention to any socketed devices.

If light bulbs are suspected, swap them with a bulb that is known to work to narrow the problem down to either a bulb or P.C. Board.

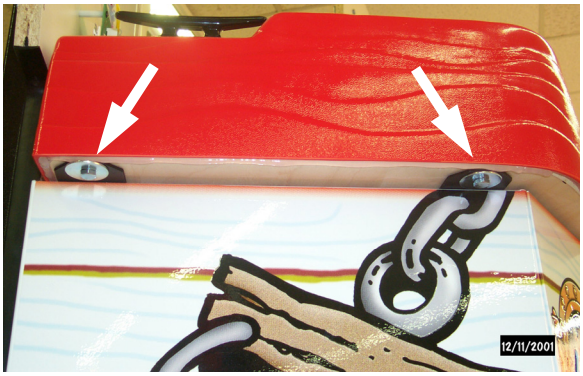
GAME REPAIR

REPLACEMENT & REPAIR

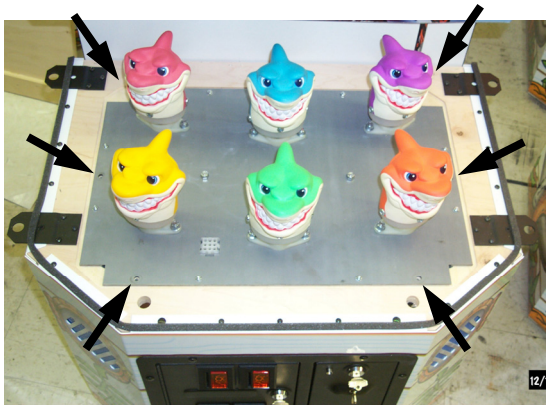
COIL BED SERVICING

To remove the coil bed:

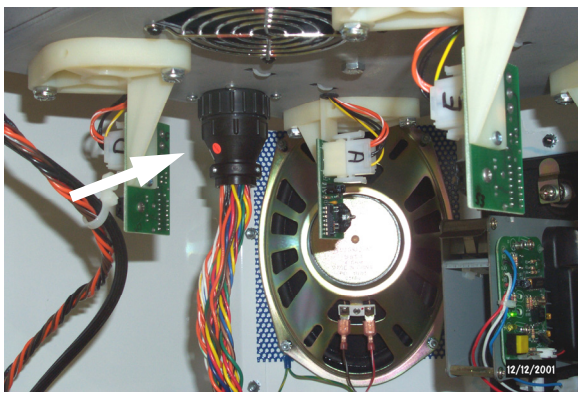
1. Remove the 4 bolts that hold the boat bow on to the cabinet. The bolts are located on the underside of the playfield, on the left & right sides of the game.



2. Remove the 6 bolts holding the coil bed in position as shown in the photo below.



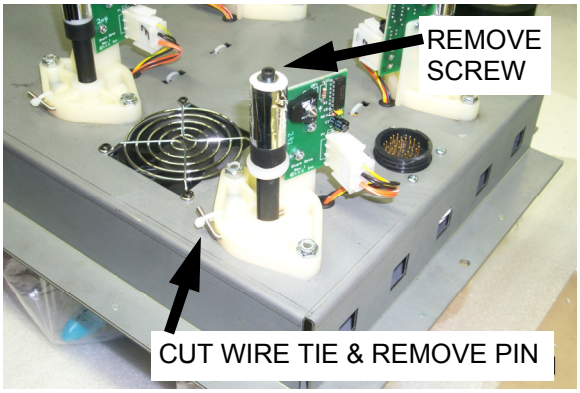
3. Unplug the multi pin connector by twisting off.



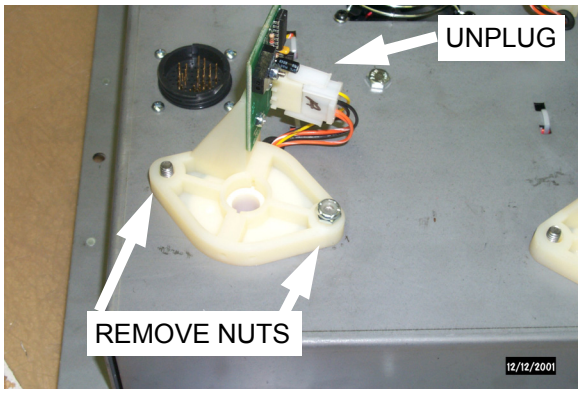
COIL BED PARTS REPLACEMENT

Service the coil bed as follows:

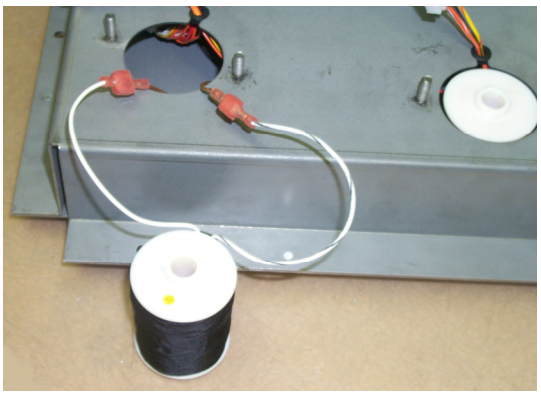
1. Remove all the shark heads from the coil bed. To remove sharks, turn the coil bed over so that the coil bed is resting on the shark heads. Remove the Allen head screw from the shaft. Cut the wire tie and remove the locking pin. Pull the shark heads through the coil bed.



2. Unplug the Sensor PCB Assembly. Remove the two Nylok nuts holding the coil cap.



4. Disconnect the wires to the coil & remove.



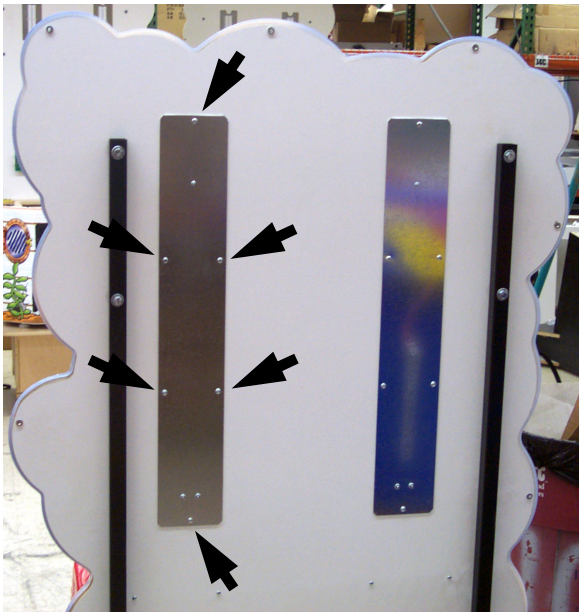
5. Assemble in reverse order.

GAME REPAIR

MARQUEE BULB / DISPLAY BOARD SERVICE

To replace a light bulb:

1. Remove the square drive screws on the rear of the marquee, that attach the lamp mounting panels. Start with the side that looks like the light is out.

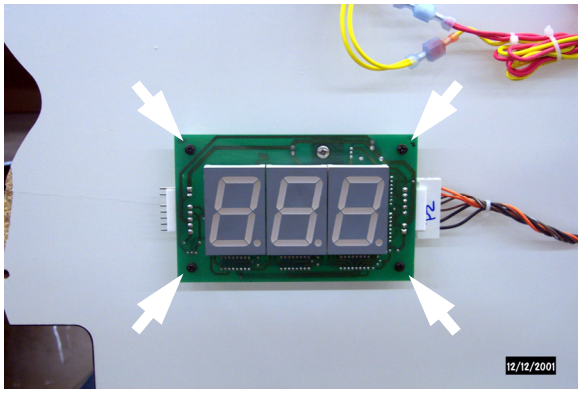


Display Board follow the directions below:

1. CAUTION: Be sure that the power has been disconnected before attempting to unplug the Display Boards.

2. Remove the security Allen bolts around the perimeter of the marquee.

3. Using a Phillips screwdriver, remove the four screws that hold the board in place.



4. Repeat the previous steps to remove the second display.

IF YOU HAVE ANY QUESTIONS OR COMMENTS, PLEASE CONTACT OUR SERVICE DEPARTMENT AT:

716-759-0360
MON. THRU FRI. 8AM-5PM EST

PARTS LISTING

Parts denoted with * indicate available as part of a specially discounted spares kit.

MECHANICAL PARTS

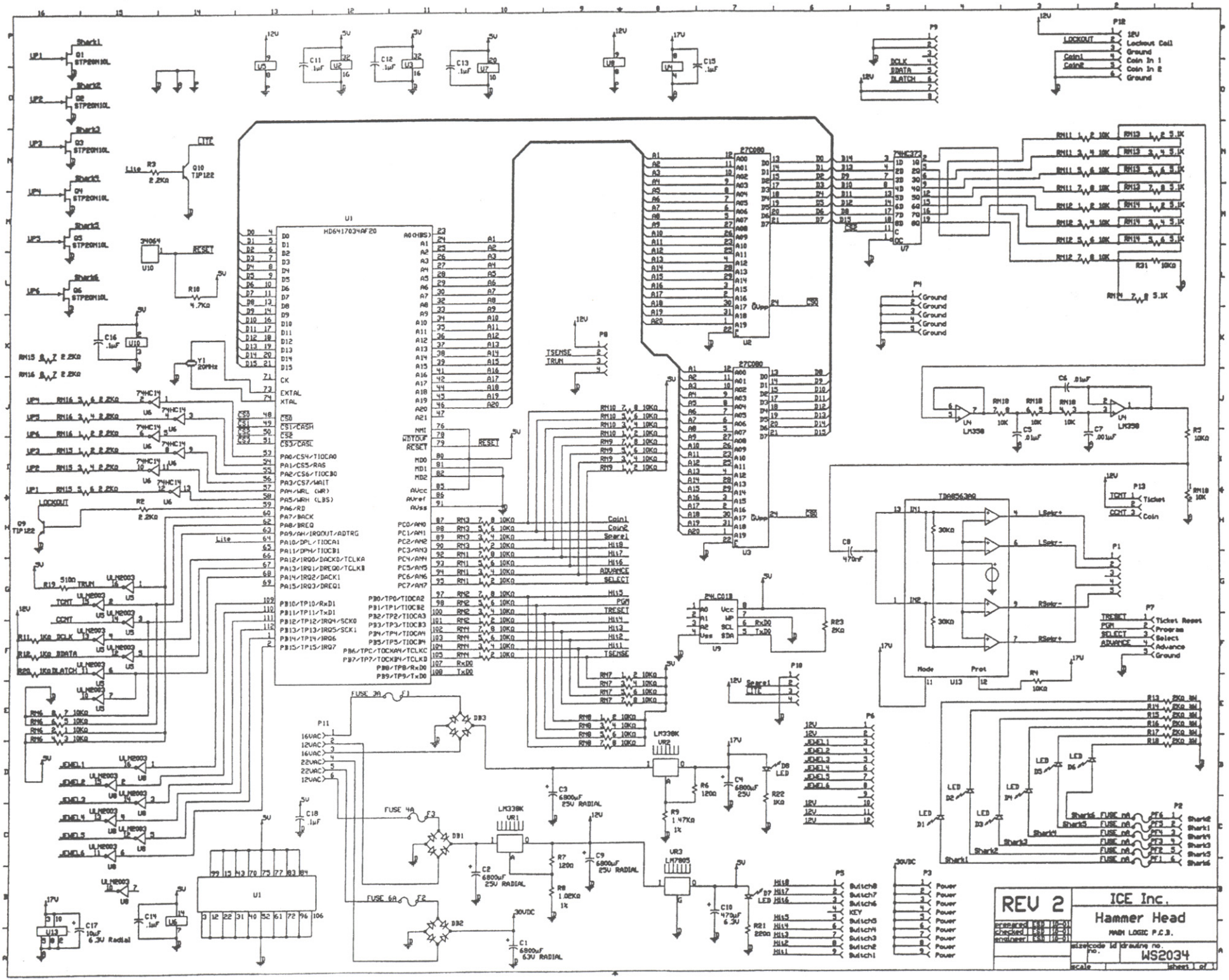
211	Low Ticket Micro Switch
BW250X	PLL Bulb Socket Assembly
FP1004	Leg Leveler Mounting Bracket
HR1019	Leveler Foot
Ws1022	Ticket Bin Entropy Style
1026	Bracket, Low Ticket Switch Mounting
AR2007	Speaker, 6” x 9”
BW2017	PLL Bulb Retaining Clip
BW2018	PLL Bulb Support
2027	Fan, DC 12 Volt
CC2027	Power Cord, 20 ft.
5101X	Mech Holder Assembly
BW8284X	Workhorse 6 Ballast, (WH6-120-L)
8312*	Bulb, PL-L 40W/41/RS/IS Fluorescent
HH5005	Ticket Dispenser
WA4010	Mallet
WS4011B	Shark head only Blue
WS2011BX	Shark head w/base Blue
WS4011G	Shark head only Green
WS2011GX	Shark head w/base Green
WS4011O	Shark head only Orange
WS2011OX	Shark head w/base Orange
WS4011PU	Shark head only Purple
WS2011PUX	Shark head w/base Purple
WS4011PI	Shark head only Pink
WS2011PIX	Shark head w/base Pink
WS4011Y	Shark head only Yellow
WS2011Y	Shark head w/base Yellow
175	Immonex Mech.
1026	Low Ticket Switch
2289	Reset Button
CG2027	Power Cord 9’
2364	Coil Bed Fan
WA1054	Limiting Pin
WS7027X	Marquee Vacuum Form
WS3004	Boat Cleat
WS8444X	Jewel Light Assembly
WS2011X	Base Assembly
WS9001	Service Manual
WS2011SX	Full assembly of shark heads w/base
WS3003X	Playfield assembly
WA3006	Shaft Cap
WSsharkkit	Shark + Mallet kit

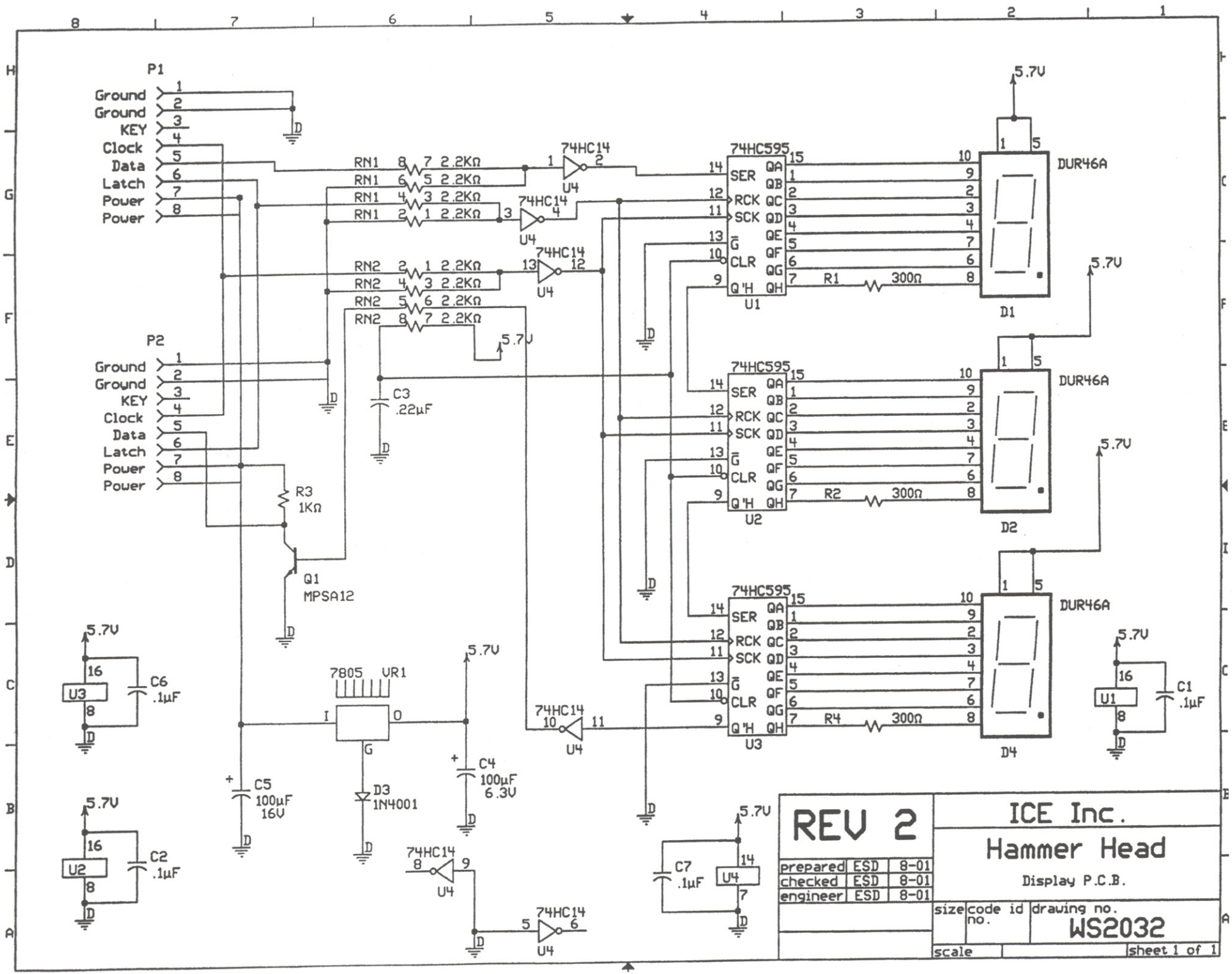
ELECTRONIC / ELECTRICAL

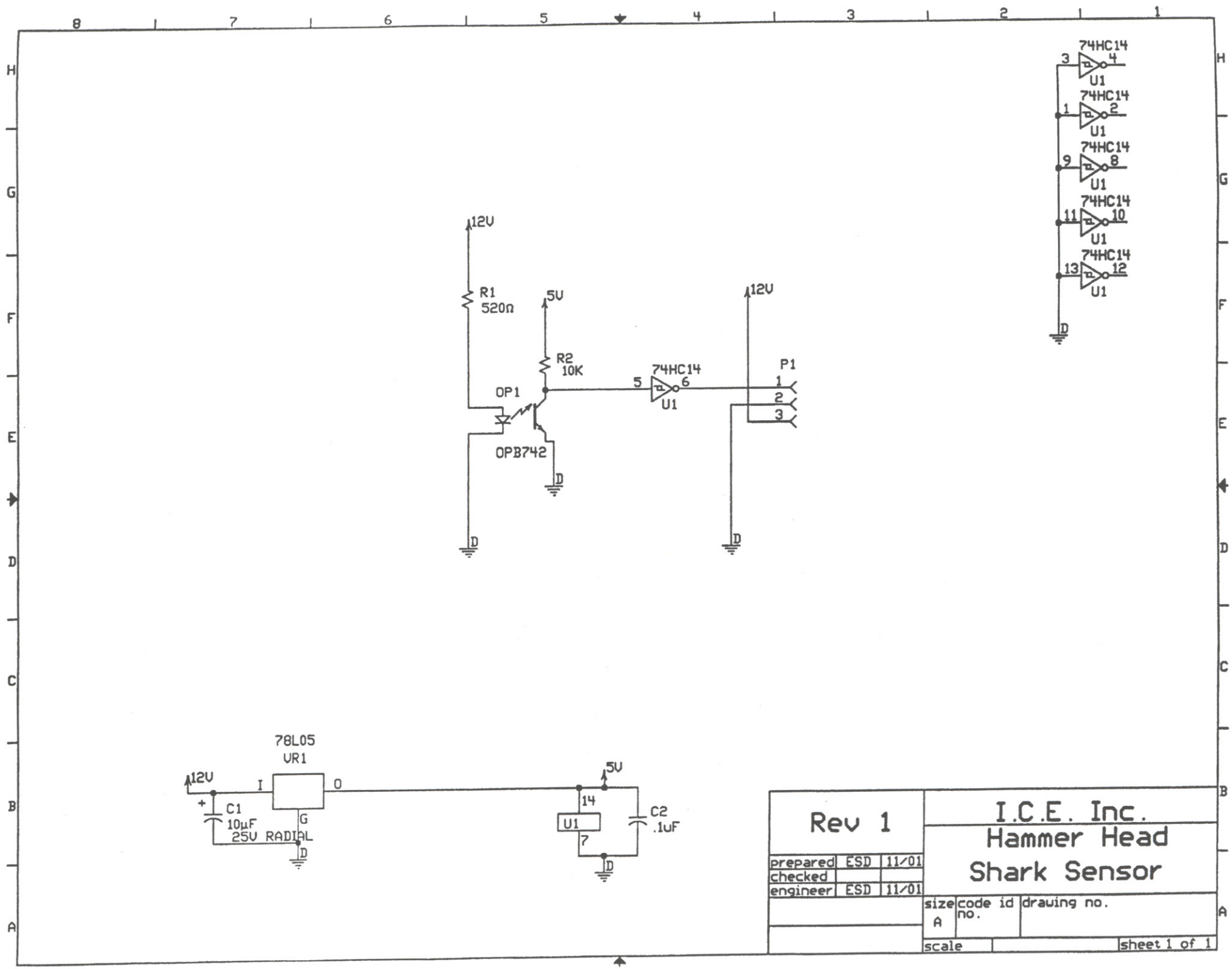
WS2034X	Main PCB
WS2032X	Display Boards
2295	Fuse, MDQ6 (6 Amp Slo Blo)
2315	Fuse, MDQ3 (3 Amp Slo Blo)
8212	Flashing LED (Low Ticket)
MZ8284X	Ballast Workhorse 6
WA3001X	Coil
WS2002X	Transformer
WS2007X	Power mod
WS2039X	Shark opto
8312	Light Bulb
WSlightkit	Light + sensor kit
WSsparekit	Spare parts kit

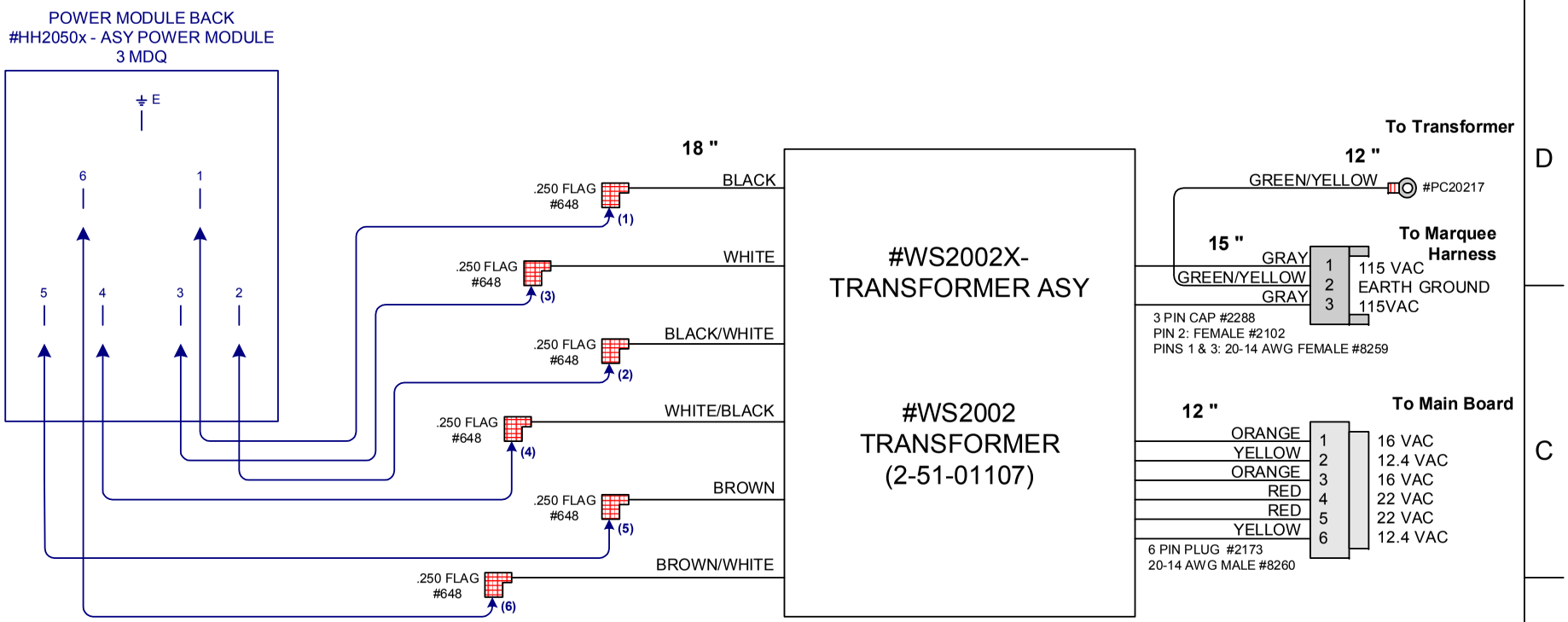
DECALS AND GRAPHICS

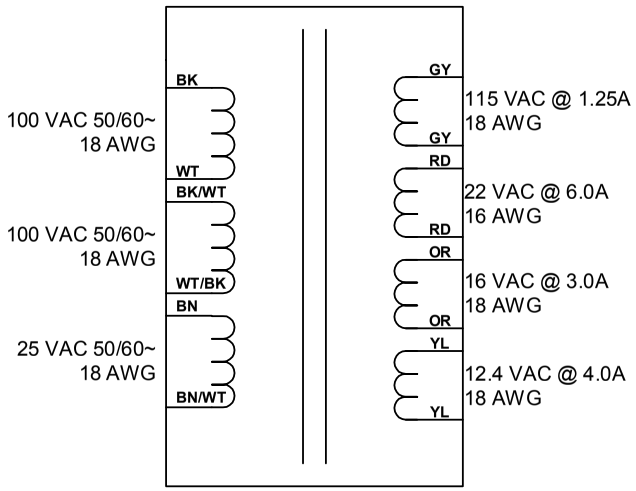
WS7003	BOAT DECK DECAL
WS7005	FRONT DECAL
WS7112	RIGHT SIDE DECAL
WS7110	LEFT SIDE DECAL
WS7027	MARQUEE (BACK DROP)
WS7006	ICE LOGO

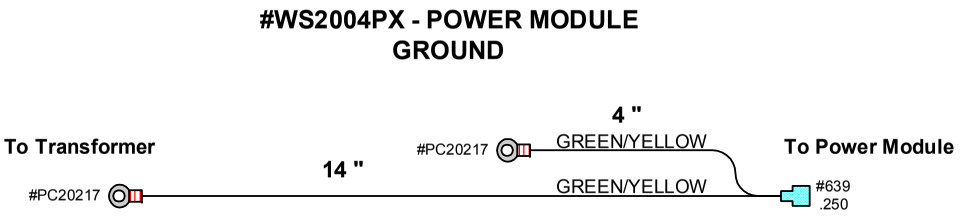

REV 2
ICE Inc.
Hammer Head
MAIN LOGIC P.C.B.
WS2034
HD6417034AF20
Z7C080
74HC373
TDA8563BQ
LM338K
LM7805
24LC018
LM358
Lockout
Coin1
Coin2
Spare1
Hit8
Hit7
Hit6
Hit5
Hit4
Hit3
Hit2
Hit1
ADVANCE
SELECT
TSENSE
TRUM
RCLK
SDATA
SLATCH
RESET
Lite
30VDC
Shark1
Shark2
Shark3
Shark4
Shark5
Shark6


P1
Ground
Ground
KEY
Clock
Data
Latch
Power
Power
P2
RN1 2.2KΩ
RN2 2.2KΩ
74HC14
U4
74HC595
U1
U2
U3
SER
RCK
SCK
G
CLR
Q'H
QA
QB
QC
QD
QE
QF
QG
QH
R1 300Ω
R2 300Ω
R4 300Ω
R3 1KΩ
Q1 MPSA12
5.7V
DUR46A
D1
D2
D4
C1 .1µF
C2 .1µF
C3 .22µF
C4 100µF 6.3V
C5 100µF 16V
C6 .1µF
C7 .1µF
7805 VR1
D3 1N4001
REV 2
prepared ESD 8-01
checked ESD 8-01
engineer ESD 8-01
ICE Inc.
Hammer Head
Display P.C.B.
size
code id no.
drawing no.
WS2032
scale
sheet 1 of 1

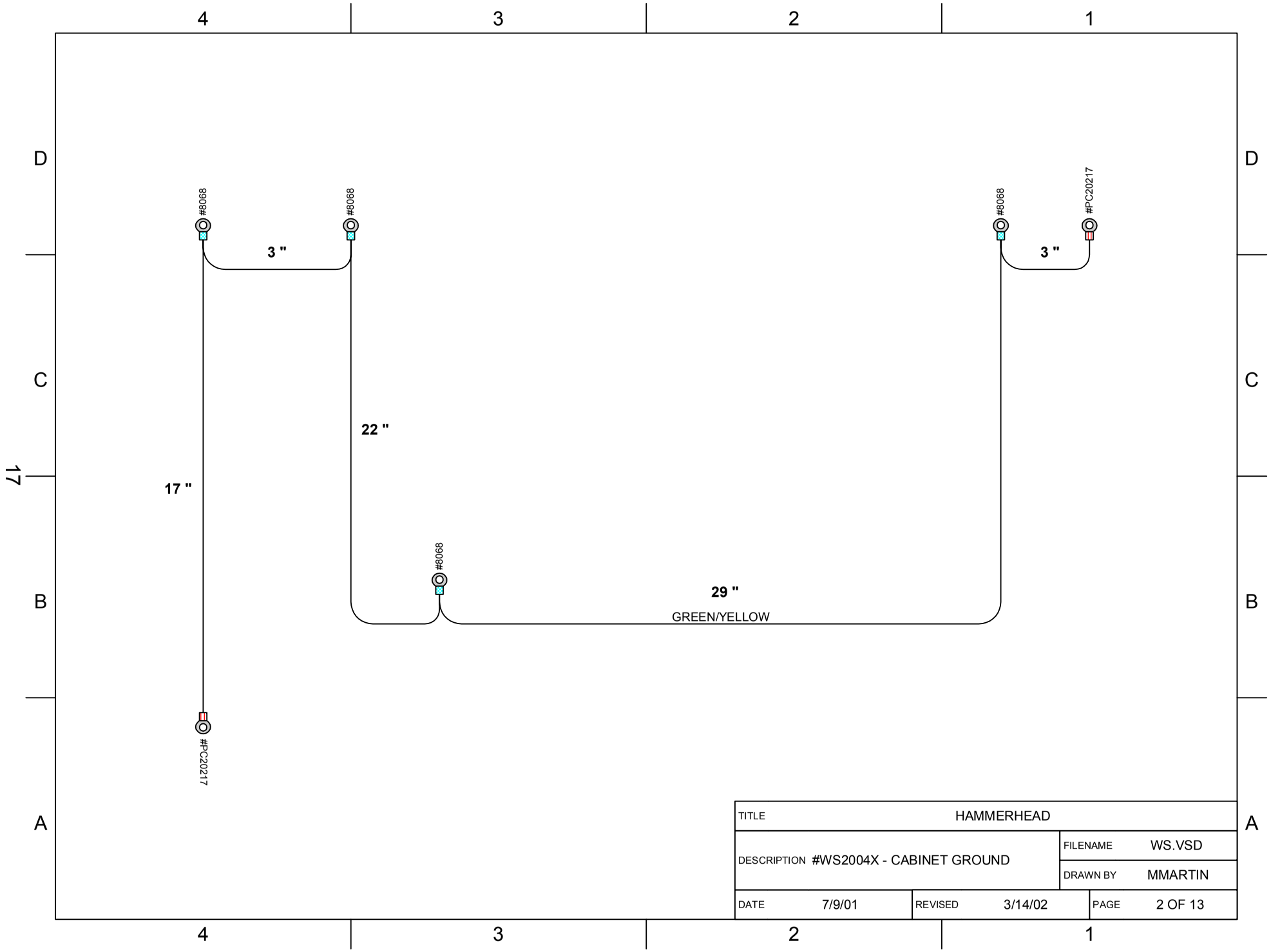

74HC14
U1
12V
R1
520Ω
5V
R2
10K
OP1
OPB742
P1
78L05
VR1
C1
10µF
25V RADIAL
C2
.1uF
Rev 1
I.C.E. Inc.
Hammer Head
Shark Sensor
prepared ESD 11/01
checked
engineer ESD 11/01
size A
code id no.
drawing no.
scale
sheet 1 of 1



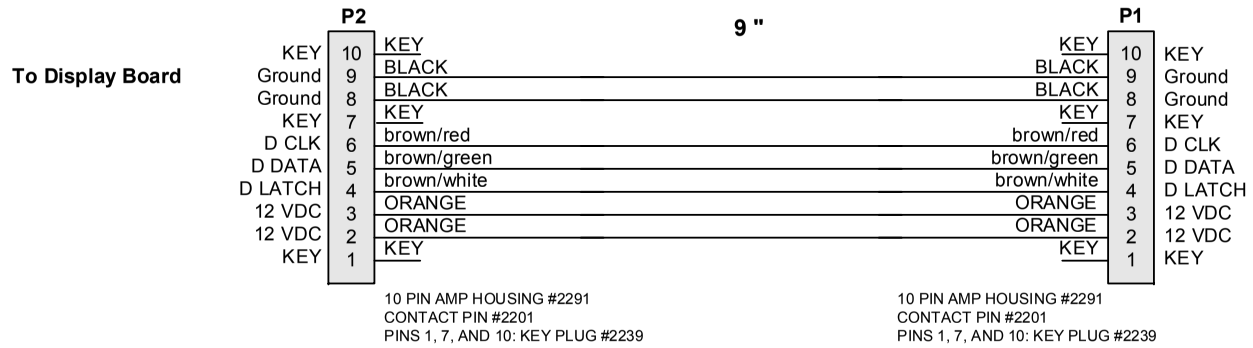




TITLE	HAMMERHEAD		
DESCRIPTION	#WS2002X - ASY TRANSFORMER #WS2004PX - POWER MODULE GROUND HARNESS	FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE 7/9/01	REVISED 3/14/02	PAGE	1 OF 13

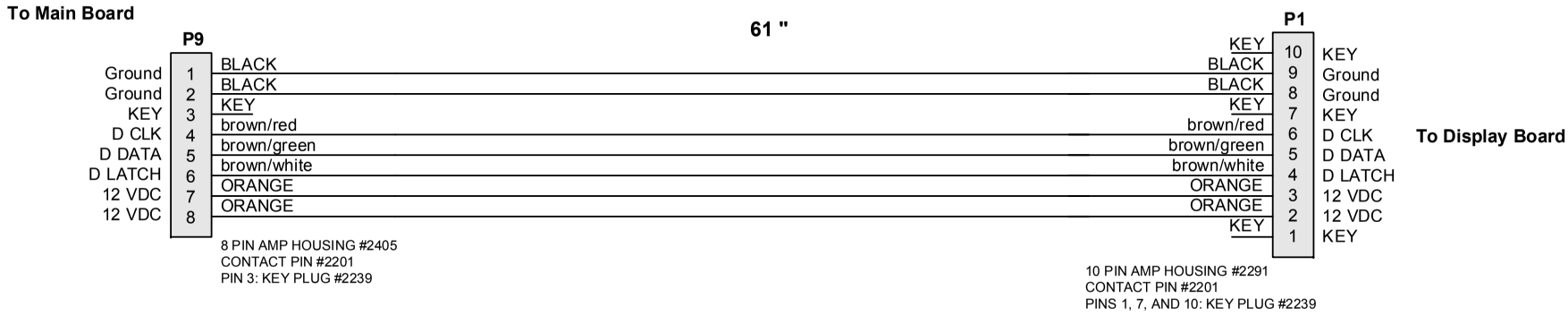


TITLE	HAMMERHEAD		
DESCRIPTION #WS2004X - CABINET GROUND		FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE 7/9/01	REVISED 3/14/02	PAGE	2 OF 13



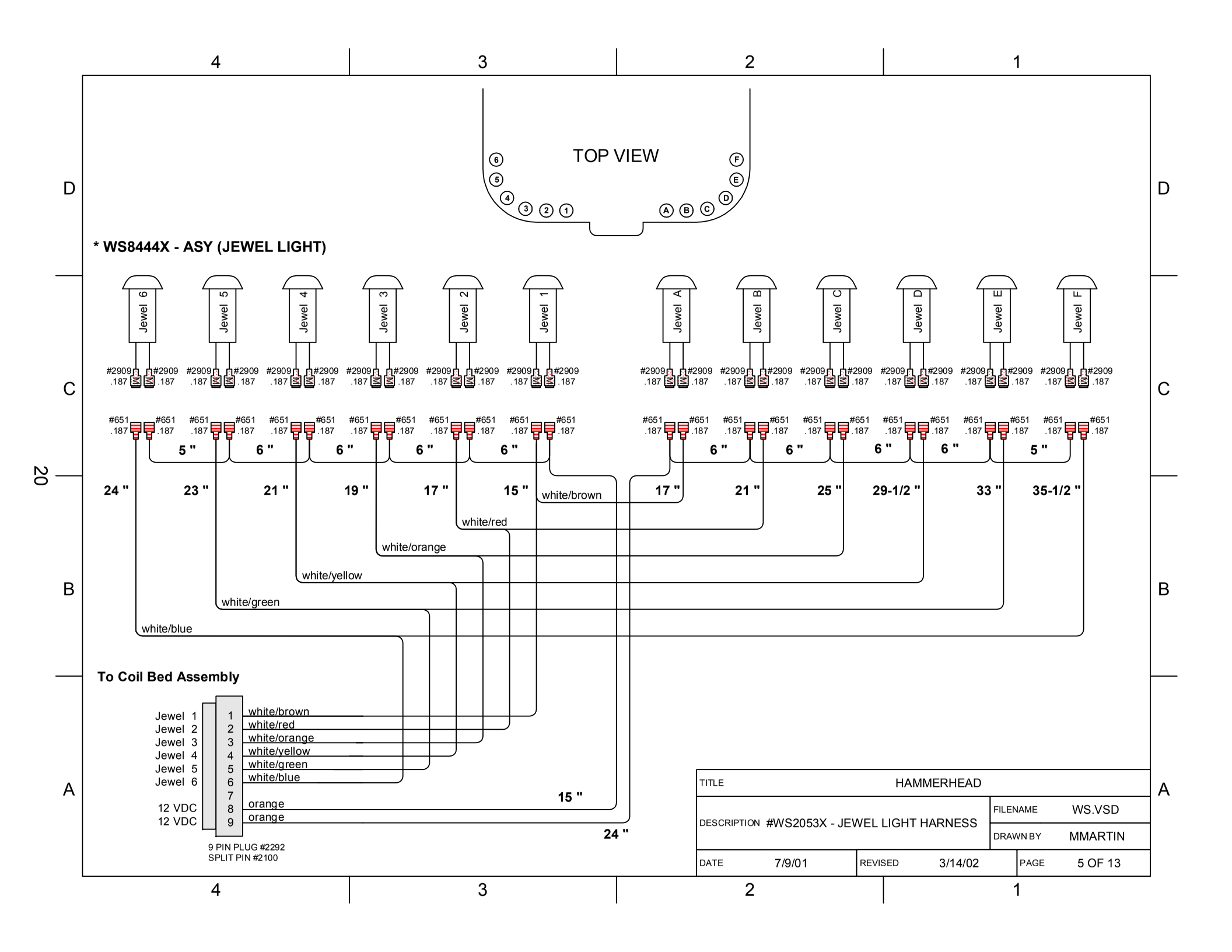
QTY	1	PER GAME

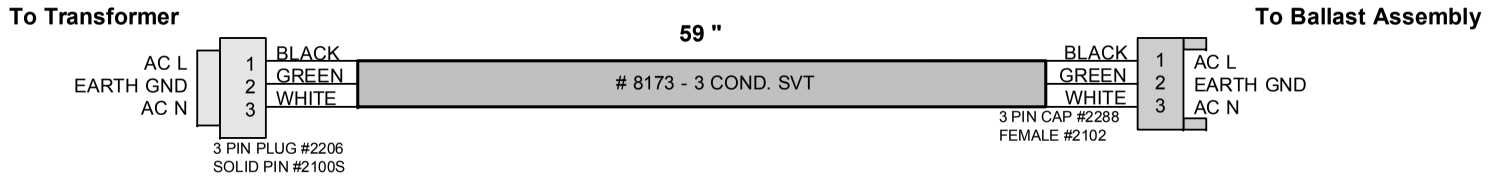
TITLE	HAMMERHEAD		
DESCRIPTION	#WS2051AX - DISPLAY INTERCONNECT HARNESS	FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE 7/9/01	REVISED 3/14/02	PAGE	3 OF 13



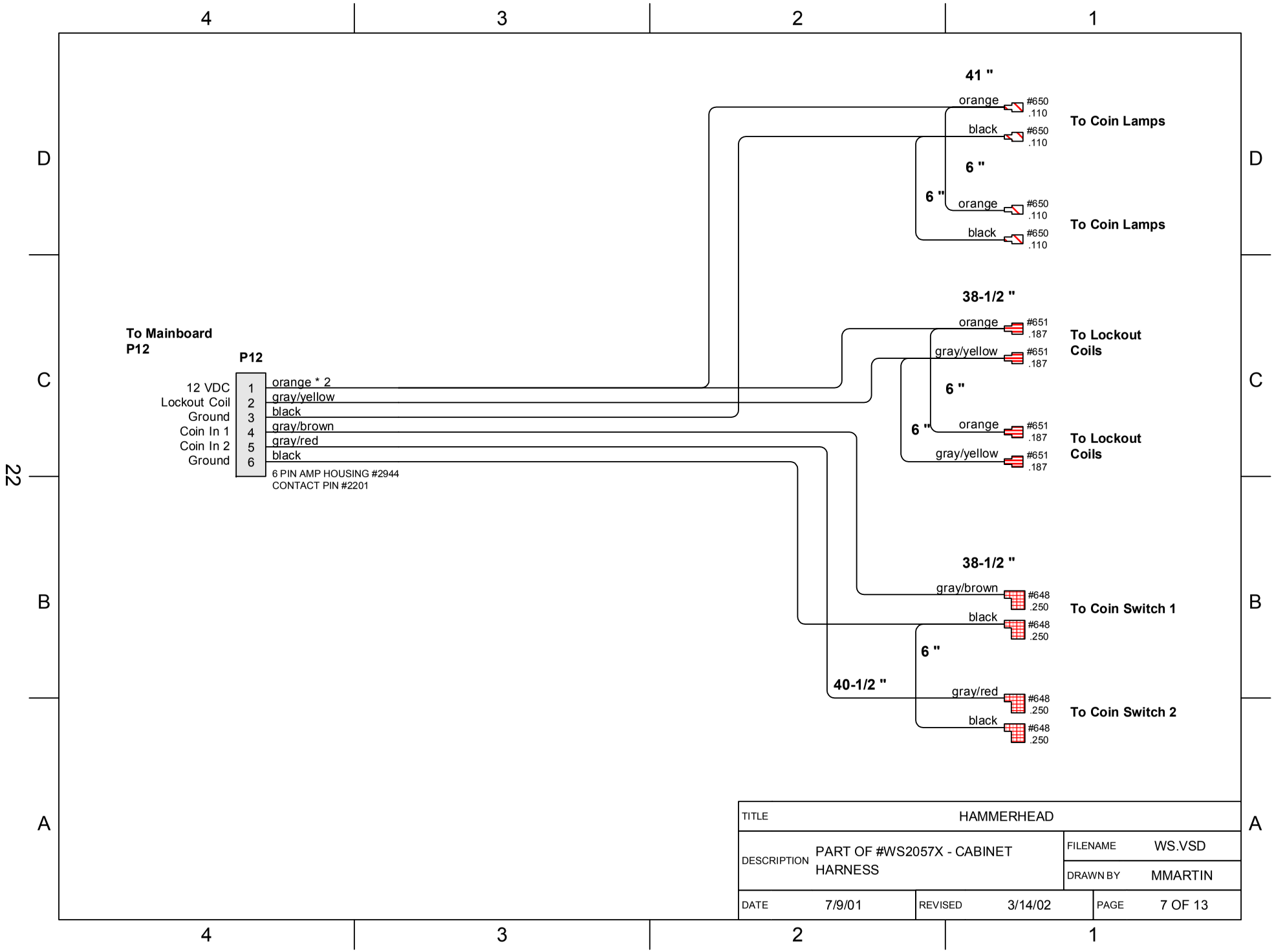
QTY	1	PER GAME

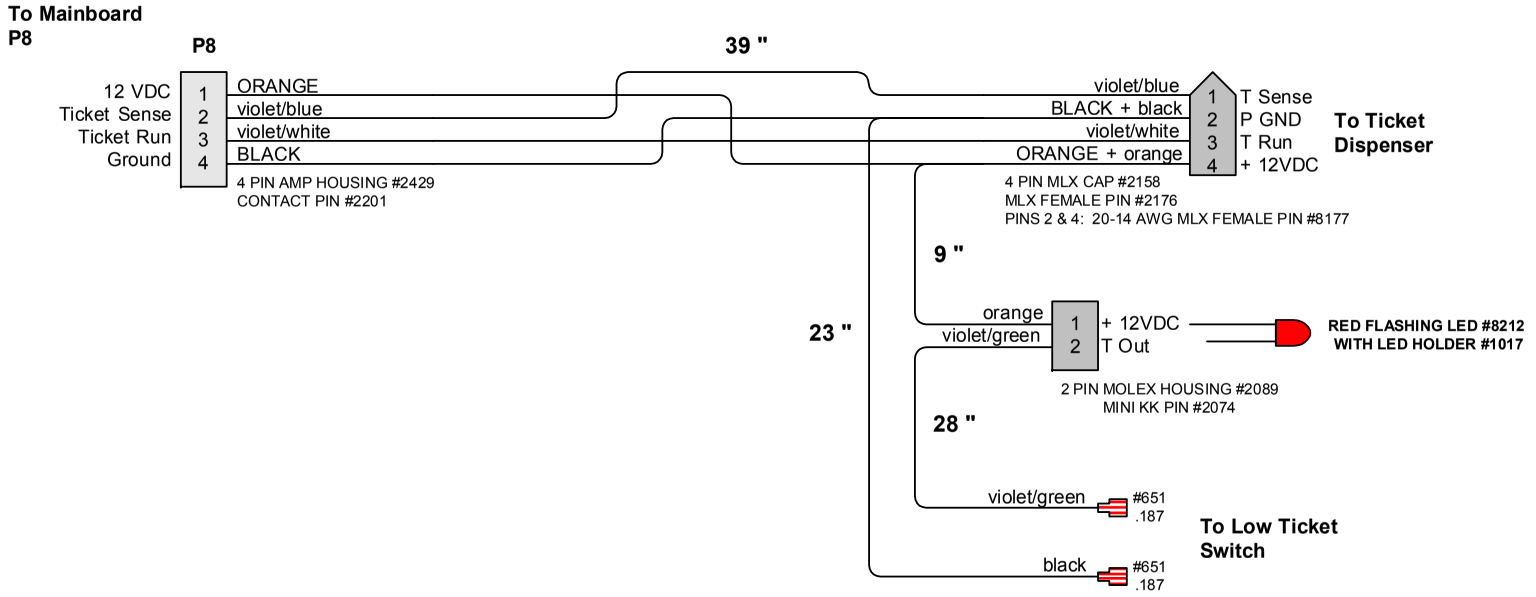
TITLE	HAMMERHEAD		
DESCRIPTION	#WS2051X - DISPLAY HARNESS	FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE 7/9/01	REVISED 3/14/02	PAGE	4 OF 13


TOP VIEW
6
5
4
3
2
1
F
E
D
C
B
A
* WS8444X - ASY (JEWEL LIGHT)
Jewel 6
Jewel 5
Jewel 4
Jewel 3
Jewel 2
Jewel 1
Jewel A
Jewel B
Jewel C
Jewel D
Jewel E
Jewel F
#2909 .187
#651 .187
5 "
6 "
24 "
23 "
21 "
19 "
17 "
15 "
white/brown
white/red
white/orange
white/yellow
white/green
white/blue
17 "
21 "
25 "
29-1/2 "
33 "
35-1/2 "
To Coil Bed Assembly
Jewel 1
Jewel 2
Jewel 3
Jewel 4
Jewel 5
Jewel 6
12 VDC
12 VDC
orange
orange
15 "
24 "
9 PIN PLUG #2292
SPLIT PIN #2100
TITLE HAMMERHEAD
DESCRIPTION #WS2053X - JEWEL LIGHT HARNESS
FILENAME WS.VSD
DRAWN BY MMARTIN
DATE 7/9/01
REVISED 3/14/02
PAGE 5 OF 13

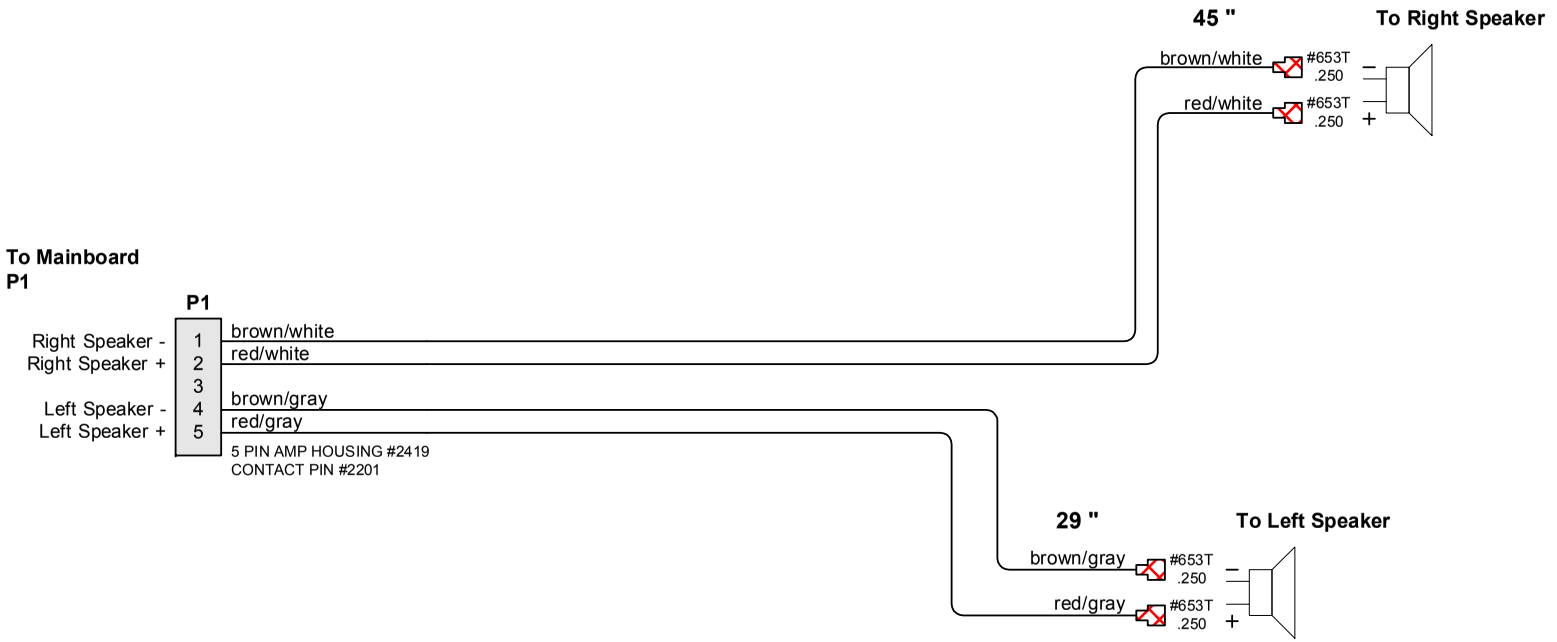


TITLE	HAMMERHEAD		
DESCRIPTION #WS2056X - MARQUEE HARNESS		FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE 7/9/01	REVISED 3/14/02	PAGE	6 OF 13

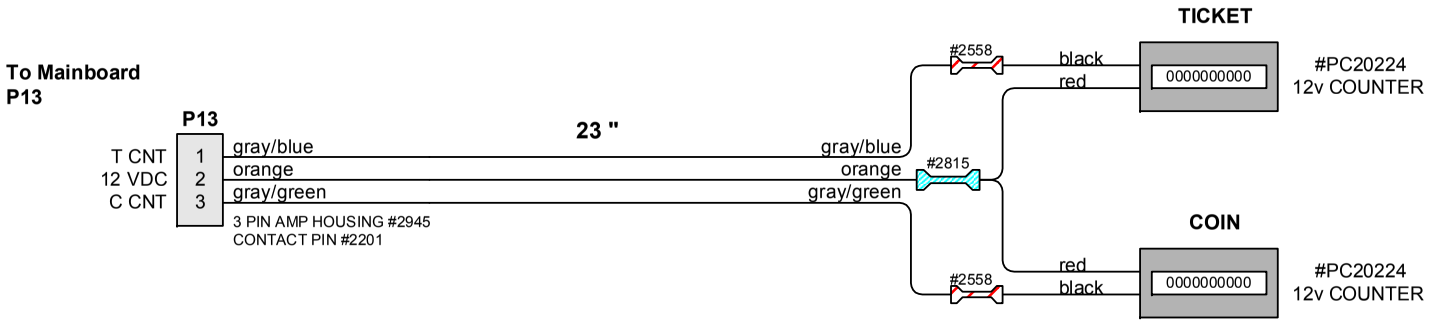

To Mainboard
P12
P12
12 VDC
Lockout Coil
Ground
Coin In 1
Coin In 2
Ground
1
2
3
4
5
6
orange * 2
gray/yellow
black
gray/brown
gray/red
black
6 PIN AMP HOUSING #2944
CONTACT PIN #2201
41 "
orange
black
#650 .110
To Coin Lamps
6 "
6 "
orange
black
#650 .110
To Coin Lamps
38-1/2 "
orange
gray/yellow
#651 .187
To Lockout Coils
6 "
6 "
orange
gray/yellow
#651 .187
To Lockout Coils
38-1/2 "
gray/brown
black
#648 .250
To Coin Switch 1
6 "
40-1/2 "
gray/red
black
#648 .250
To Coin Switch 2
TITLE
HAMMERHEAD
DESCRIPTION
PART OF #WS2057X - CABINET HARNESS
FILENAME
WS.VSD
DRAWN BY
MMARTIN
DATE
7/9/01
REVISED
3/14/02
PAGE
7 OF 13



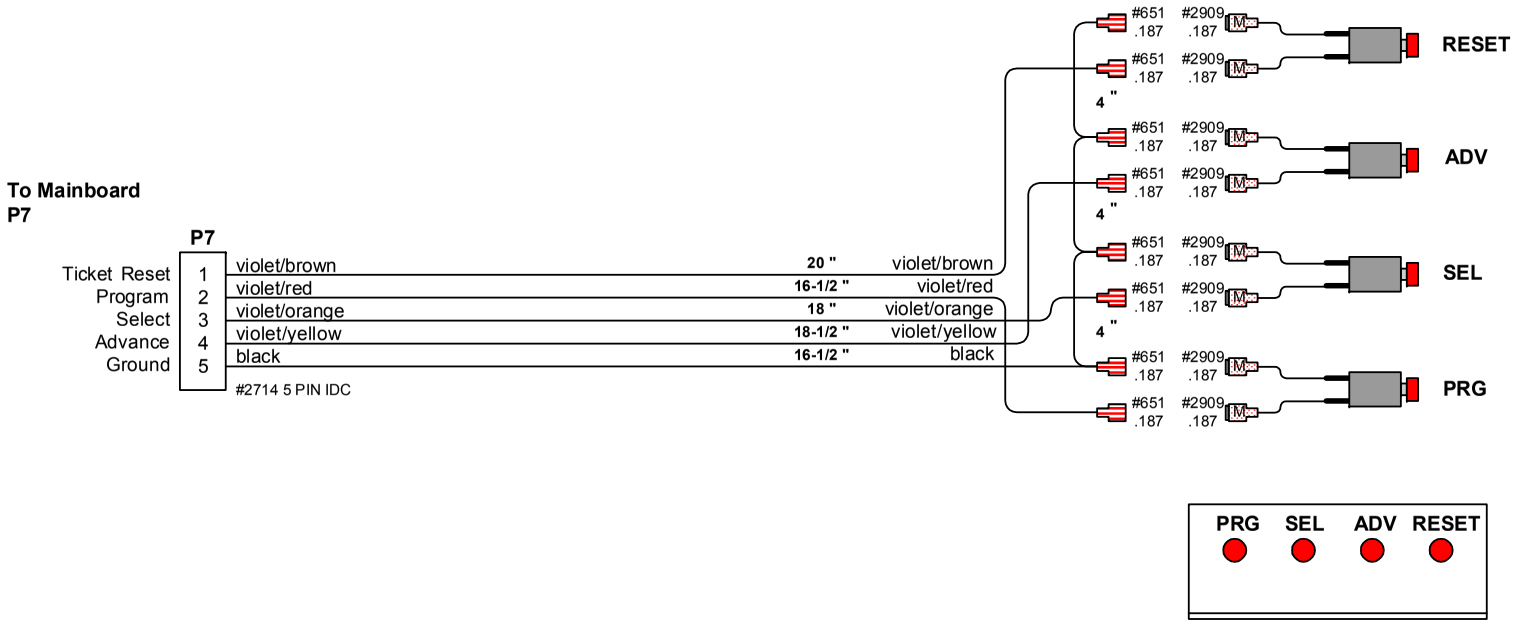
TITLE	HAMMERHEAD		
DESCRIPTION	PART OF #WS2057X - CABINET HARNESS	FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE	7/9/01	REVISED	3/14/02
PAGE	8 OF 13		

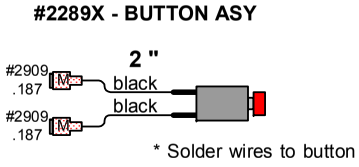


TITLE	HAMMERHEAD		
DESCRIPTION	PART OF #WS2057 - CABINET HARNESS	FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE	7/9/01	REVISED 3/14/02	PAGE 9 OF 13



TITLE	HAMMERHEAD		
DESCRIPTION	PART OF #WS2057X - CABINET HARNESS	FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE 7/9/01	REVISED 3/14/02	PAGE	10 OF 13





TITLE	HAMMERHEAD		
DESCRIPTION	PART OF #WS2057X - CABINET HARNESS	FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE	7/9/01	REVISED 3/14/02	PAGE 11 OF 13

P2 — 44 "

Shark 2	1	TAN/BLACK	62
Shark 1	2	RED/BLACK	58
Shark 4	3	ORANGE/BLACK	51
Shark 3	4	YELLOW/BLACK	43
Shark 5	5	GREEN/BLACK	26
Shark 6	6	BLUE/BLACK	18

6 PIN AMP HOUSING #2944
CONTACT PIN #2201

P3 — 42 "

30 VDC	1	BROWN	63
30 VDC	2	RED	59
30 VDC	3	ORANGE	52
30 VDC	4	YELLOW	44
30 VDC	5	GREEN	27
30 VDC	6	BLUE	19
30 VDC	7		
30 VDC	8		
30 VDC	9		

9 PIN AMP HOUSING #8136
CONTACT PIN #2201

P4 — 65 "

Ground	1	black	41
Ground	2	black	24
Ground	3	black	3
Ground	4		
Ground	5		

5 PIN AMP HOUSING #2419
CONTACT PIN #2201

P5 — 57 "

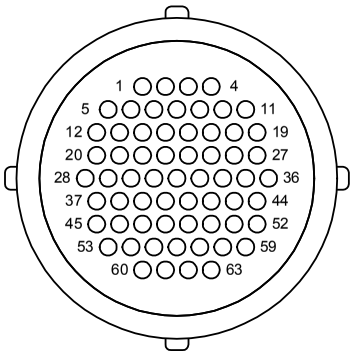
	1		
	2		
OPTO SENSE 6	3	yellow/blue	17
KEY	4	KEY	
OPTO SENSE 5	5	yellow/green	25
OPTO SENSE 4	6	yellow/white	42
OPTO SENSE 3	7	yellow/orange	50
OPTO SENSE 2	8	yellow/red	57
OPTO SENSE 1	9	yellow/brown	56

9 PIN AMP HOUSING #8136
CONTACT PIN #2201
PIN 4: KEY PLUG #2239

P6 — 45 "

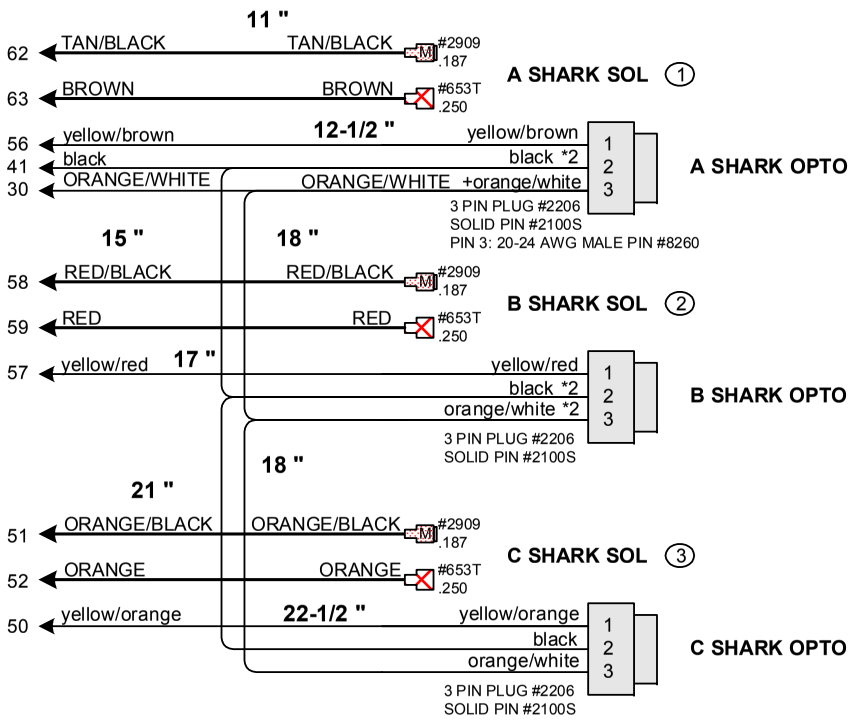
12 VDC	1	ORANGE/WHITE	30
12 VDC	2	ORANGE/WHITE	14
Jewel 1	3	white/brown	61
Jewel 2	4	white/red	54
Jewel 3	5	white/orange	46
Jewel 4	6	white/yellow	38
Jewel 5	7	white/green	21
Jewel 6	8	white/blue	13
	9		
12 VDC	10	orange	22
12 VDC	11	orange	39
12VDC	12	orange	4

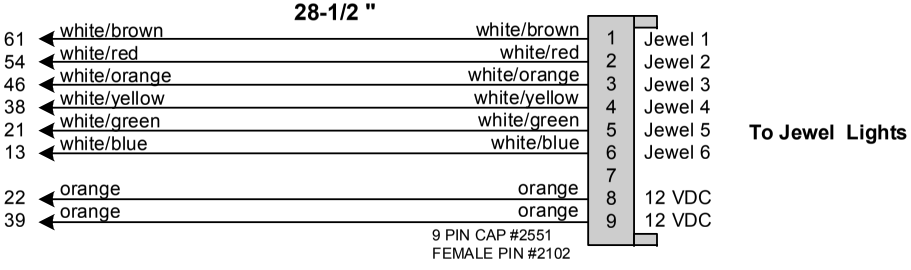
12 PIN AMP HOUSING #8428
CONTACT PIN #2201

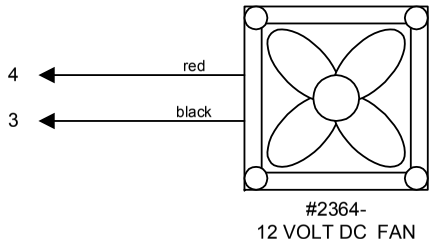


63 PIN CIRCULAR PLUG #8111
FEMALE PIN #8112
CLAMP #8110

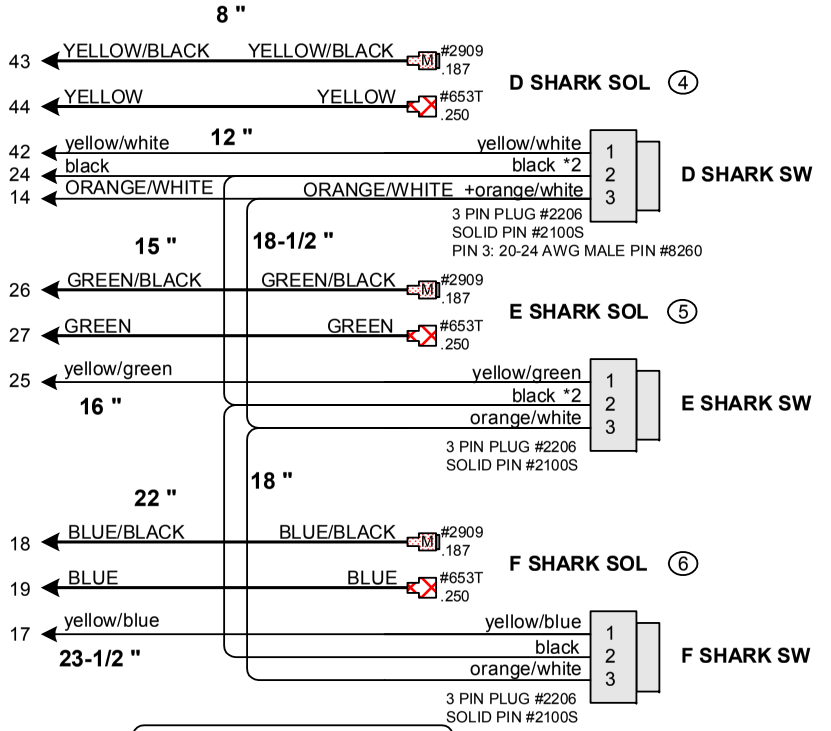
TITLE	HAMMERHEAD		
DESCRIPTION	#WS2059X - MAIN TO COIL BED HARNESS	FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE	7/9/01	REVISED	3/14/02
		PAGE	12 OF 13

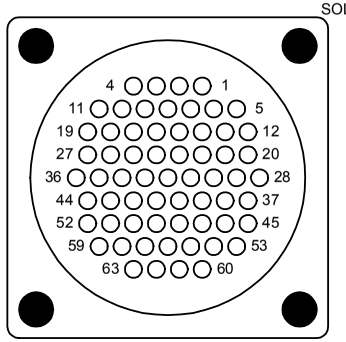




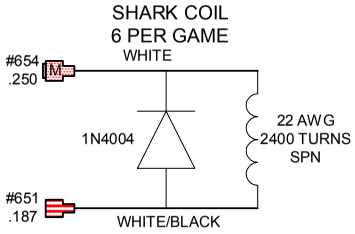


*** Put grommets (WA4011) on flag FASTON wires before FASTONS are put on.**





63 PIN CIR.RECEP.PNL. MT. #8113
MALE PIN #8114



#WA 3001X - ASY (COIL)

TITLE	HAMMERHEAD		
DESCRIPTION #WS2060X - COIL BED HARNESS		FILENAME	WS.VSD
		DRAWN BY	MMARTIN
DATE 7/9/01	REVISED 3/14/02	PAGE	13 OF 13

WARRANTY

I.C.E warrants all components in the **HAMMERHEAD**™ game to be free of defects in materials and workmanship for a period of 90 days from the date of purchase. Furthermore, all MAIN P.C. BOARDS are warranted for 180 days.

This warranty does not cover items damaged due to normal wear and tear, subjected to abuse, improperly assembled by the end user, modified, repaired, or operated in a fashion other than that described in the service manual.

If your **HAMMERHEAD**™ game fails to conform to the above-mentioned warranty, I.C.E.'s sole responsibility shall be at its discretion to repair or replace any defective component with a new or remanufactured component of equal to or greater O.E.M. specification.

I.C.E. will assume no liability whatsoever, for costs associated with labor to replace defective parts, or travel time associated therein.

I.C.E.'s obligation will be to ship free of charge, replacement parts by domestic U.P.S. Ground, U.S. mail, or other comparable shipping means. Any express mail or overnight shipping expense is at the cost of the purchaser.

Products will be covered under warranty only when:

- The serial number of the game with the defective parts is given.
- The serial number of the defective part, if applicable, is given.
- Defective parts are returned to I.C.E., shipping pre-paid, in a timely fashion, if requested by I.C.E.
- A copy of the sales receipt is available as proof of purchase upon request of I.C.E.

I.C.E. distributors are independent, privately owned and operated. In their judgment, they may sell parts or accessories other than those manufactured by I.C.E. We cannot be responsible for the quality, suitability, or safety of any non-I.C.E. part, or any modification, including labor, which is performed by such a distributor.

WARRANTY

ICE Inc warrants that all of its products will be free from defects in material and workmanship.

When placing a warranty request, please be prepared to provide the following information:

- Serial Number of Game or Bill of Sale
- Machine Type
- A Detailed Description of the Equipment Fault Symptoms

ICE product, including Cromptons, Sam's Billiards, Uniana and Bell Fruit is warranted as follows:

- 180 days on the Main PCB and Computers
- 180 days on Motors
- 90 days on all other components (i.e. DBV's, Ticket Dispensers, etc)
- 30 days on repaired items
- 3 years on all Crane Harnessing
- 9 Months on Printers

ICE Inc shall not be obligated to furnish a warranty request under the following conditions:

- Equipment has been subjected to unwarranted stress through abuse or neglect
- Equipment has been damaged as a result of arbitrary repair/modification attempts
- Equipment that has failed through normal wear and tear

ICE Inc will assume no liability whatsoever for costs associated with labor to replace defective parts or travel time associated therein.

All defective warranty covered components will be replaced with new or factory refurbished components equal to OEM specifications. ICE Inc will cover all domestic UPS ground, or comparable shipping means, freight costs during the warranty period. Expedited shipments are available for an additional charge.

Defective parts are returned to ICE Inc, at the customer's expense, in a timely fashion.

ICE distributors are independent, privately owned and operated. In their judgment, they may sell parts and/or accessories other than those manufactured by ICE Inc. We cannot be responsible for the quality, suitability or safety of any non-ICE part, modification (including labor) that is performed by such a distributor.

I.C.E. Parts/Service Dept.
Innovative Concepts in Entertainment
10123 Main St.
Clarence, NY 14031
Phone #: (716) - 759 – 0360
Fax #: (716) – 759 – 0884